

REMARKS

Claims 1-19 remain pending in this application. Of these claims, claims 1-19 stand rejected under 35 USC §101 for the reasons stated on page 2 of the Examiner's Office Action. Also, claims 1-19 stand rejected under 35 USC §102(e) as being anticipated by Heckerman.

In view of the preceding amendments and the following remarks, these rejections are traversed, and reconsideration of this application is respectfully requested.

Applicant's invention is a method of analyzing a sub-model of a full system model, and a related system. The system model is representative of a certain system. Applicant gives a non-limiting example of an applicable system for maintenance planning in a plant on page six of the specification. The method includes defining the sub-model as a collection of entities; determining which of the entities in the sub-model are calculation entities and which are data entities; converting the calculation entities in the sub-model that depend on entities in the full model that are not included in the sub-model into temporary data entities; identifying output entities in the sub-model; and analyzing the sub-model by performing the calculation for the calculation entities. Applicant's specification clearly defines the calculation entities and data entities, and defines what it means to convert the calculation entities that depend on entities in the full model that are not included in the sub-model into temporary data entities.

Each of Applicant's independent claims 1, 8 and 13 has been amended above to further state that the model represents a system, that the sub-model is defined as a collection of entities in a visual medium, and changes in the sub-model are visually analyzed in response to the calculations. Applicant submits that the prior art of record,

whether taken alone or in combination, fails to teach or suggest a method of analyzing a sub-model of a full system model, and related system, as claimed.

Applicant respectfully submits that claims 1-19 comply with §101, especially as amended. MPEP 2106 states that a claimed invention complies with §101 if it produces a “useful, concrete and tangible result.” Applicant submits that the claimed invention does produce a useful, concrete and tangible result because it allows a person to visually analyze the operation of the system that the system model represents by observing changes in the model as data is manipulated. The claimed invention further has useful, concrete and tangible results because it allows the system model to be separated into sub-models so that a person can analyze a portion of the operation of the system without having to analyze the whole system model. Applicant submits that the claimed invention is useful because it provides a manner in which calculation entities in the sub-model that depend on entities in the full-model that are not included in the sub-model are converted into temporary data entities. In this manner, the sub-model can operate separately from the full system model because no entity in the sub-model relies on an input from an entity outside of the sub-model after the conversion.

Moreover, the invention, as now more particularly claimed, satisfies §101 because it is more than an abstract idea and requires “physical acts to be performed outside of the computer”, MPEP 2106B 2(b)(i). Particularly, the system model is a visual representation of the operation of the system as input data changes, and therefore the entities are represented in a visual medium. A person who wishes to study the operation of the system model visually analyzes changes in the model in response to the calculations of the calculation entities. Therefore, Applicant respectfully submits that the invention as now more particularly claimed is more than merely an abstract idea. It is therefore respectfully requested the §101 rejection be withdrawn.


U.S. Patent No. 6,529,891 issued to Heckerman discloses a technique for determining the number of clusters in a Bayesian network, defined in column 1. The Examiner has directed Applicant's attention to figure 18 showing a Bayesian network generator 502 that includes a scoring mechanism 602, a network adjuster 606, a score 604, a test network 608 and a list of nodes 610 that are all part of a memory 304. The Bayesian network is stored in the memory 304 as a tree data structure where each node in the tree data structure corresponds to a node in the Bayesian network (column 22, lines 48-52).

Applicant's invention is not a Bayesian network, and is not a tree data structure. Applicant's representative example of the system model is an influence diagram that includes ovals and lines. Applicant admits that Heckerman shows ovals and lines. However, this is just one depiction of the operation of the invention. Applicant's claimed sub-model includes both data entities and calculation entities that are separate and distinguishable from each other. Heckerman does not appear to teach separate data entities and calculation entities that are distinguishable from each other. The sub-model is an isolated part of the full system model. The reason that the sub-model is isolated is because the calculation entities in the sub-model that depend on entities in the full model, i.e., a line from an entity outside of the sub-model is connected to an entity within the sub-model, are converted to temporary data entities. Nothing in Heckerman remotely teaches or suggests identifying a sub-model separated from a full system model where the sub-model includes calculation entities and data entities, **and where calculation entities in the sub-model that depend on entities in the full model not in the sub-model are converted into temporary data entities.**

In view of the preceding remarks, it is respectfully requested that the §102(e) rejection be withdrawn.

It is now believed that this application is in condition for allowance. If the Examiner believes that personal contact with Applicant's representative would expedite prosecution of this application, he is invited to call the undersigned at his convenience.

Respectfully submitted,

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